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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,128	10/18/2001	Gary J. Sullivan	MS1-946US	9382
22801	7590	02/23/2005	EXAMINER	
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			NATNAEL, PAULOS M	
			ART UNIT	PAPER NUMBER

2614

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,128

Applicant(s)

SULLIVAN, GARY J.

Examiner

Paulos M. Natnael

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,19-22 and 24-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,19-22 and 24-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner:
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1-13-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Upon further and careful review and consideration of both the instant application and the reference of Kesselring, the previously indicated allowability of claim 23 has been withdrawn. Examiner regrets the inconvenience this may cause the Applicant. However, this is necessary for a thorough and fair examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims **1-3,5,7,9,19-22,24-27,29-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kesselring, U.S. Pat. No. **6,081,299** in view of **Yanagihara**, U.S. Pat. No. **5,835,668**.

Considering claim **1**, Kesselring discloses the following claimed subject matter, note;

a) encoding a first frame of data, is met by video encoder 415, fig. 4;

b) generating a first timestamp associated with the first frame of data, wherein the first timestamp includes complete timing information, is met by PTS adjuster 430 (fig.4) that examines the difference between the theoretical PTS 427 and Oscillator clock 440 and

Art Unit: 2614

outputs adjusted PTS 432 for each frame of data in accordance to the end-of-field (EOF) interrupt signal 416 input to it from the encoder 415. (see disclosure on col. 6, lines 36-40) As to the claimed wherein the first timestamp is a full timestamp, it is implied in the reference of Kesselring, because Kesselring does not preclude the timestamp from being a full timestamp.

c) transmitting the first frame of data and the associated first timestamp to a destination, is met by TSMux 435 Fig.4 which multiplexes the received adjusted PTS 432, video and audio data received from the video and audio encoders, respectively.

d) encoding a second frame of data, is met by video encoder 415, fig. 4;

e)generating a second timestamp associated with the second frame of data, wherein the second timestamp includes a portion of the complete timing information..., is met by PTS adjuster 430 (fig.4) that examines the difference between the theoretical PTS 427 and Oscillator clock 440 and outputs adjusted PTS 432.

f) transmitting the second frame of data and the associated second timestamp to the destination, is met by TSMux 435 Fig.4 which multiplexes the received adjusted PTS 432, video and audio data received from the video and audio encoders, respectively.

Except for;

h) wherein the second timestamp is a compressed timestamp;

Regarding h), Kesselring discloses that MPEG header information is used to specify frame rate and time stamp associated, video and audio data. (col. 2, lines 45-49) Kesselring teaches compressed MPEG data that is decompressed at the receiver end as is well known in the art. Kesselring does not specifically disclose whether or not the timestamp information is compressed. However, Kesselring does not preclude the timestamp being a compressed timestamp either. In other words, since Kesselring teaches the compressed MPEG data, the header data where the time stamp is included may be compressed as well for purpose of bandwidth reduction or similar other reasons. Such methods are well known in the art. In that regard, Yanagihara discloses a transmission, recording and reproduction of digital data and time information in transport packets using a compression ration, where "a data packet contain[ing] time information is time compressed and the time information is extracted from the time compressed data packet." (see Abstract) Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Kesselring by providing the method of the Yanagihara reference of compressing the timestamp data of in order to save transmission bandwidth and processing time when decoding the timestamp information at the receiver end.

Considering claim 2, a method as recited in claim 1 further comprising:

a) encoding a third frame of data, *is also met by video encoder 415, fig. 4, which will continue to encode the next frame sequentially.*

b) generating a third timestamp associated with the third frame of data, wherein the third timestamp includes a portion of the complete timing information, is also met by PTS adjuster 430 (fig.4) that examines the difference between the theoretical PTS 427 and Oscillator clock 440 and outputs adjusted PTS 432 for each frame of data in accordance with the EOF interrupt 416 input to it from the encoder 415. (col. 6, lines 36-40)

c) transmitting the third frame of data and the associated third timestamp to the destination, is also met by TSMux 435 Fig.4 which multiplexes the received adjusted PTS 432, video and audio data received from the video and audio encoders, respectively.

Considering claim 3, a method as recited in claim 1 further comprising:

a) identifying timing information related to transmitting the first and second frames of data, is met by PTS adjuster 430, fig.4.

b) transmitting the timing information to the destination, is also met by PTS adjuster 430 which transmits the timing information adjusted PTS 432 to TSMUX 435, which in turn multiplexes the data and transmits it to decoder.

Considering claim 5, a method as recited in claim 1 wherein the first timestamp includes an offset value that is used to relate the time associated with a frame of data to true time, is met by the adjusted PTS 432, fig.4;

Considering claim 7, a method as recited in claim 1 further comprising:

- a) encoding a plurality of frames of data, is met by video encoder 415 (fig. 4) which encodes a plurality of frames of data sequentially input to it from the A/D converter 405.
- b) generating additional timestamps associated with each of the plurality of frames of data, wherein the majority of the additional timestamps include a portion of the complete timing information, is met by PTS adjuster 430 (fig.4) that examines the difference between the theoretical PTS 427 and Oscillator clock 440 and outputs adjusted PTS 432 for each frame of data in accordance to the EOF interrupt 416 input to it from the encoder 415. (col. 6, lines 36-40)

Considering claim 9, One or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 1, is met by the disclosure on col. 5, lines 59 thru col. 6, line 7, that "It will be understood that each block of the flowchart illustrations, and combinations of blocks in the flowchart illustrations, can be implemented by computer program instructions. These program instructions may be provided to a processor to produce a machine, such that the instructions which execute on the processor create means for implementing the functions specified in the flowchart block or blocks. The computer program instructions may be executed by a processor to cause a series of operational steps to be performed by the processor to produce a computer implemented process such that the instructions which execute on the processor provide steps for implementing the functions specified in the flowchart block or blocks."

Considering claim **19**, a method comprising: receiving a first frame of data; receiving a first timestamp associated with the first frame of data, wherein the first timestamp includes complete timing information for the first frame of data; receiving a second frame of data, receiving a second timestamp associated with the second frame of data, wherein the second timestamp includes a portion of the timing information, and wherein the first timestamp is a full timestamp and the second timestamp is compressed timestamp.

Regarding claim 19, see rejection of claim 1.

Considering claim **20**, a method as recited in claim 19 further comprising decoding the first frame of data and the second frame of data, is met by decoder 135, Fig.1A.

Considering claim **21**, a method as recited in claim 19 further comprising:

a) receiving a third frame of data; b) receiving a third timestamp associated with the third frame of data, wherein the third timestamp includes a portion of the timing information; and decoding the third frame of data.

Regarding claim 21, see rejection of claim 19.

Considering claim **22**, a method as recited in claim 19 further comprising receiving timing information related to the manner in which frames of data are transmitted from a data source, is met by Decoder 135, fig.1A;

Considering claim 24, a method as recited in claim 19 wherein receiving the first timestamp includes updating all timing parameters with the information contained in the first timestamp, is implied in that when a timestamp information is received it would replace or update the timing information of the timestamp received earlier, since the received timestamp is replacing the previous one.

Considering claim 25, a method as recited in claim 19 wherein receiving the second timestamp includes updating timing parameters with the information contained in the second timestamp.

See rejection of claim 24.

Considering claim 26, one or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 19.

Regarding claim 26, see rejection of claim 9.

Considering claim 27, One or more computer-readable media having stored thereon a computer program that, when executed by one or more processors, causes the one or more processors to:

Encode a first frame of data;

generate a first timestamp associated with the first frame of data, wherein

the first timestamp includes complete time information;

encode a plurality of subsequent frames of data; and
generate a plurality of subsequent timestamps, wherein each of the
subsequent timestamps includes a portion of the time information, and wherein the first
timestamp is a full timestamp and the plurality of subsequent timestamp are
compressed timestamp.

Regarding claim 27, see rejection of claim 1. (see also the disclosure on col. 5,
lines 6-8)

Considering claim 29, one or more computer-readable media as recited in claim 27
wherein each of the subsequent timestamps includes a frame number.

Regarding claim 29, see rejection of claim 9.

Considering claim 30, an apparatus comprising:

- a) an encoded multimedia content source, is met by encoder 100,fig.1A.
- b)a decoder coupled to receive encoded multimedia content from the encoded
multimedia content source, wherein the video content includes a first frame of data
having an associated first timestamp, such that the first timestamp includes complete
timing information for the first frame of data, and wherein the encoded multimedia
content includes a second frame of data having an associated second timestamp, such
that the second timestamp includes a subset of the timing information included in the
first timestamp..., is met by decoder 135 Fig.1A, that receives frames of video data and
PTS information from the encoder 100 through the connection 120, Figs. 1A and 4.

As for the claimed limitation, wherein the first timestamp is a full timestamp and the second timestamp is compressed timestamp, see rejection of claim 1;

Considering claim 31, an apparatus as recited in claim 30 wherein the decoder is configured to decode the first frame of data and the second frame of data, is met by decoder 135 (fig.1A) which is capable of decoding sequentially received of encoded video and PTS information..

4. Claims 4, 6, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kesselring and Yanagihara, as applied to claims 1-3 above, and further in view of Higurashi U.S. Pat. No. 5,970,668.

Considering claim 4, a method as recited in claim 1 wherein the first timestamp includes hour information, minute information, second information, and a frame number.

Regarding claim 4, Kesselring as modified above discloses that MPEG header information is used to specify frame rate and time stamp associated, video and audio data. (col. 2, lines 45-49) Kesselring does not specifically disclose details of the timestamp information. However, it is well known in the art that the timestamp information comprises hour, minute, and second information. It is also well known in the art that time stamp information may be expressed as in "hhmmss" format. Higurashi discloses a time code data that may be added to the information signal. Fig.4 of Higurashi illustrates the time code data comprising units of frames, units of second,

Art Unit: 2614

units of minutes, units of hours and units of days. Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Kesselring by providing the format of Higurashi in the header data, in order that one timestamp would be easily differentiated from another or that more information such as a frame number may be added to a second, different timestamp, so that the digital data is easily distinguishable by the program or software of the system. (see also Kesselring, col. 2, lines 31-41)

Considering claim 6, a method as recited in claim 1 wherein the second timestamp includes a frame number.

See rejection of claim 4;

Considering claim 28, one or more computer-readable media as recited in claim 27 wherein the complete time information includes hour information, minute information, second information, and a frame number.

Regarding claim 28, see rejection of claim 4;

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Svanbro et al., (U.S. 6,535,925) discloses a packet header compression using division remainders which compresses and decompresses the time stamp information.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (703) 305-0019. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (703) 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PMN
February 15, 2005



PAULOS M. NATNAEL
PATENT EXAMINER